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Books

When the constitution goes to the laboratory

Andrea Boggio

Politics in the Laboratory: the constitution of human genomics **by Ira H Carmen**
University of Wisconsin Press, 2004, Madison, Wisconsin, 314 + xvii pages, US$35.00, ISBN 0-299-20210-0

Another book on the ethical and legal issues of genetics and genomics? There is no lack of monographs on the ethics and public policy implications of genetic research and genomics. Yet, Ira Carmen's *Politics in the Laboratory* is worthy reading at least for three reasons.

First, the book provides an insightful, historical account of the scientific progresses, and the associated policy and ethical debate, on human genome research, cloning, and germ-line engineering. Although the focus of Carmen's exploration is almost entirely on the United States, his historical account is of great interest to a neophyte 'biolegalist' such as me and all other young scholars who were not necessarily interested in the field when these events and discussions took place.

The author's perspective is interesting for two reasons. Professor Carmen was close to, and sometimes directly involved with (as in the case of his service in the 70s and 80s as a member of the Recombinant DNA Advisory Committee), many of the facts and people described in the book. Secondly, as a political scientist interested in science progress, he looks at the issue from a rather unusual perspective.

Indeed, the unusual perspective that the author brings to the debate leads me to the second reason why *Politics in the Laboratory* is a worthwhile read. Professor Carmen argues that scholars and primarily political scientists must integrate two disciplines that have been unrelated for many years: biopolitics and constitutional politics. The author refers throughout the book to the coming together of these two disciplines as "bioconstitutionalism". Carmen's call for integration of biology and social sciences is based on the argument that both disciplines would benefit from a more interactive dialogue.

As far as biology is concerned, biologists would benefit from interacting with political scientists because they would acquire a better understating of the implications of scientific progress in terms of power, leadership, and statecraft. The discussion on the human genome project (chapter 2) provides a good illustration of how institution and power may enlighten the understanding of the scientific investigation progress currently.

In particular, by analyzing the leadership of the Human Genome Project in terms of power — Watson's leadership as an orchestra director as a prelude to a power game between Collins and Venter — the author concludes that much of biomedical research is governed by the "Beltway Constitution": this means the norms and logic that govern all aspects of today's major player in biomedical research, the National Health Institute. (For the benefit of the readers not familiar with Washington DC and its surroundings, the National Health Institute is located on the Beltway, that is, the ring of freeways that contains the urban extension of the US Capital.)

Moreover, it is quite informative how the author uses a constitutional framework to analyze how the social and ethical implications of genetic research have changed scientific investigation. In fact, before the genetic revolution, scientific research was "the quintessential stuff of free expression, of First Amendment activities" (page 130). Now, in the era of public scrutiny of science and overview by ELSI (ethical, legal and social implications) Committees, because of their power to pierce the veil of what influences attitudes and behaviors, science

> has departed the world of solitary investigation governed by the absolutes of freedom and entered a new constitutional world, the world of

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> social responsibility and accountability … it becomes subject to the checks and balances we place on all centers of power. (page 130)

A similar approach is used to analyze germ-line engineering: the author describes genetic engineering technologies as a "forbidden knowledge" since the public refuses to debate it because of its association with eugenics. From his dissatisfaction with the state of the current way of handling this subject, Ira Carmen argues that a democratic society has all the constitutional and institutional equipment (proper for any "republican form of government") to deal with such biological information and indeed how a democratic nation faces this challenge is a measure of its maturity (page 128).

The last part of *Politics in the Laboratory*, the most forward-looking and intellectually courageous, discusses how political science would benefit from continuing interactions and dialogue biology. The core of the argument is that, in a not-so-distant future, genomics research could disclose the biological basis for social behavior. The 'new' political science would then develop within the empirical context supplied by life science rather than sociology.

Moreover, biology would also cast a light on the adaptive strategies of *Homo politicus* through biological intervention programs. In other words, in a few years, biology could tell us why we socialize, why one institutional arrangement is better suited to our social attitudes than another, "whether a parliamentary system is to be preferred over a presidential system" (page 243), to name a few.

Life science would then empower, in a bottom-up perceptive, "policy science" with the possibility of shaping policies that control, and eventually modify, the social predispositions of human beings. Because of the immense power that policy-making could receive from biology, a constitutional order is needed to provide "a viable place and context for ethics in the affairs of *Homo politicus*", hence shifting to what Professor Carmen calls the "bioconstitutionalism politics paradigm" (page 248).

Finally, a note on Ira Carmen's writing style. At first, reading *Politics in the Laboratory* is, at times, a frustrating experience. Quite frequently, the author inserts personal comments and asides in parenthesis, thus interrupting the logical flow of the factual account or the argument presented. Although initially, these inserts, page after page, are frustrating, the reader becomes acquainted with this narrative style and is able to appreciate the inserts by putting them in context. Sometimes, the personal comments even turn out to be the most interesting part of a paragraph.

Does genetic engineering pose a significant risk?

K Ravi Srinivas

Science, Seeds and Cyborgs: Biotechnology and the Appropriation of Life **by Finn Bowring**
Verso, London, 2003, 338 + xiv pages, £19/US$27, ISBN 1-85384-687-4

In *Science, Seeds and Cyborgs*, the author discusses the implications of medical and agricultural applications of genetic engineering. The ethical aspects are discussed in detail, while the social and political aspects are also taken into account. Hence this volume tries to provide an integrated assessment of the application of genetic engineering in the health and agriculture sectors.

The crucial difference between biotechnology and other technologies is that biotechnology has the potential to challenge some of the cherished notions about our lives and bodies. The technology can reconfigure our relationship not only with nature but also within human communities. This potential creates a sense of wonder and also a sense of repulsion. Thus, the major issue is how we decide what it means to be human in the biotechnological age.

The first half of the book is devoted to applications of genetic engineering in plants and animals, while the second half concentrates on medicine and human health. The book opens with an introductory chapter that challenges the assumptions of genetic reductionism. The author highlights the risks of wide-scale application of genetically modified plants in agriculture and how this is being spearheaded by life-science companies that are emerging as monopolies.

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